



MONTANA AERONAUTICS COMMISSION



Volume 15, No. 7

August, 1964

COMMISSION ELECTS NEW OFFICERS

At the regular monthly meeting of the Montana Aeronautics Commission held July 15 in Helena, Gordon R. Hickman was elected Commission Chairman for the coming year.



Chairman, Hickman

Mr. Hickman, Harlowton, represents the Municipal League on the Commission. He received his law degree in 1940 and had his private law practice in Great Falls until 1941. He was Superintendent of San Jacinto Army Ordinance Depot at Houston, Texas from 1941 until 1945 at which time he became the attorney for the Veterans Administration at Fort Harrison, Helena. In 1950, Gordon returned

to private law practice at his present location. Gordon, his wife Jo, and their three daughters, reside at 1212 NW View, Harlowton.

Mr. Walter Hope was elected Vice-Chairman. Mr. Hope represents the County Commissioner's Association on the Commission. Mr. Hope is engaged in extensive ranching operations south of Hysham, Montana, which includes the original homestead of his parents, Mr. and Mrs. B. W. Hope. Walter has served as County Commissioner for Treasure County for the past 14 years, serving eight of those years as Chairman. Walter and his wife Alice, have four children.

Mr. Carl W. "Bill" Bell was elected Secretary-Treasurer and represents the Montana Pilot's Association. Mr. Bell is an active member of his local hanger and of the state organization. Bill is a member of the Montana State Chamber of Commerce and was Chairman of their Aviation Committee at the time the State Chamber sponsored the Montana Air Tour to Canada and Alaska. Bill is a pilot that does extensive flying in his own Beechcraft Bonanza in his personal business and pleasure.

Bill, his wife Dorothy and their six children have resided in Glasgow for the past seven years where Bill owns and operates the Bell Mortuary.

MEMORY OF CROMWELL DIXON HONORED

A wreath was placed on the Monument of Cromwell Dixon by his sister Mrs. Lulu Rogers of Columbus, Ohio on July 27. The Monument located in front of the Administration Building on the Helena Airport was erected in commemoration of Dixon and his historic flight over the Continental Divide in 1911.

Dixon was the feature attraction of the 1911 Montana State Fair in Helena, and the 19 year old established a world's record by being the first airplane across the Continental Divide. Dixon flew from the fairgrounds, clearing the crest at 7,000 feet, across the Divide to Blossburg, a small Montana community 18 miles west of Helena and returned to the fairgrounds to receive \$10,000 prize money and the acclaim of an enthusiastic crowd. Tragically, young Dixon was killed during the Spokane, Washington Fair, only two days after his flight across the Divide.

The reception for Mrs. Rogers at the Helena Airport and commemoration ceremonies were arranged by Mr. L. W. Upshaw and the Montana Centennial Commission with the support of the Helena Airport personnel, Civil Air Patrol and the Montana Aeronautics Commission.

A visit to the recreation area and
(Continued on Page 3, Col.-1)

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

Box 1698
Helena, Montana

Tim Babcock, Governor

Charles A. Lynch, Director

Gordon Hickman, Chairman
Walter Hope, Vice Chairman
Carl W. (Bill) Bell, Secretary
Herb Jungemann, Member
E. B. Cogswell, Member
Clarence R. Anthony, Member
Jack R. Hughes, Member



DIRECTOR'S COLUMN

IN MEMORIAM HARDY H. SANDVIG 1921 - 1964

Sandvig - Breiter
Fort Benton, Montana

Hardy Sandvig was associated with his father-in-law William Breiter in the General Aviation Operation of Sandvig-Breiter at Fort Benton, Montana.

Hardy was active in General Aviation circles for a number of years and was a Past President of the Montana Aviation Trades Association.

Hardy Sandvig held the respect of Montana pilots throughout his aviation career.

ATTENTION ALL PILOTS!!

LETTER TO AIRMEN FROM—HELENA COMBINED STATION/TOWER.

The purpose of this letter is to inform you that the Helena Tower and the Helena Flight Service Station will be combined on August 1, 1964. The combined Station/Tower (CS/T) will be located in the control tower cab on the top floor of the Administration Building at the Helena City-County Airport 3 miles northeast of Helena.

All frequencies and services that have been provided will remain unchanged with the exception that we will no longer have transmitting capability on 278 KCS.

A flight plan desk with current NOTAMS and weather information will be available to pilots in the

Tower Cab. We would like to encourage you to visit our new facility and file your flight plans in person. However, if this should be inconvenient, the Weather Bureau Office on the main floor of the administration building will have a supply of flight plan forms, and you may telephone direct to the Combined Station/Tower from their office. Pilot weather briefing will also be conducted at the Weather Bureau office. In addition, Morrison Flying Service has a direct line phone which may be used to call flight plans to the combined Station Tower. For those of you who call on the regular telephone exchange, dial 442-9902. This is the same number that is presently listed for the Control Tower. The phone number for the Flight Service Station will be permanently discontinued.

Radio procedures will be the same as you are now using. When calling flight plans, enroute position reports, or any other communications messages, call "Helena Radio" on the appropriate communications frequency. When calling for taxi, take-off, landing or approach clearances, call "Helena Tower" on the appropriate Tower frequency.

On July 23, 1964 at 0001 MST VOR was shut down. During the time of shutdown the frequency was changed from 117.9 MCS to 117.7 MCS.

Hours of actual control tower operation was increased from 16 hours per day to 24 hours per day on August 1.

Ludwig G. Hodge
Chief, Helena CS/T

DILLON AD BUILDING DEDICATION AUGUST 16, 1964

Schedule:

8:00-10:30 A.M. — Fly-In Breakfast served by the Dillon Ski Club.

11:00-12:00 — Dedication Ceremonies. Sponsored by the MAC, the MPA, the Beaverhead County Airport Board and the Federal Aviation Agency. State Representative, Frank W. Hazelbaker will be the Master of ceremonies. Beaverhead County Airport Chairman, Harold Briggs will be one of the featured speakers.

12:00 Noon—Air Show. The air show will feature an Air Race, Aerobatics; Parachute Jumps; and the Great Falls' Air Guard will present an Aerial Fly-By.

Refreshment Concessions will be available.

The Public is cordially invited to attend.

Pilots:—Let's have a real turn out!!

Operators and Aviation Mechanics Sept. 15 Awards Selection Date

The annual Aviation Mechanic Safety Awards selection will be made September 15. The awards will be made for calendar year 1963 contributions.

State winners will be selected by September 15 and awards will be presented between October 15 and October 31.

Eligible mechanics may submit their own entry form. In addition, supervisors or other knowledgeable personnel may submit an entry form for an eligible aviation mechanic. Entries should be made on FAA Form 3338, Entry Form-Aviation Mechanic Safety Award, and submitted to the FAA district office having jurisdiction over the geographic area in which the mechanic is employed.

"Two-Layer Airways Structure to Be Implemented"

A new airways route structure will be implemented by the Federal Aviation Agency on September 17 when the existing three-layer system is replaced by a two-layer system.

FAA states operational experience with the three-layer structure has shown that it complicates air traffic control procedures—particularly in transition of aircraft between the three structures—and increases the workload of both pilots and air traffic controllers. It also requires additional aeronautical navigation charts and more en route radio frequency changes—both for navigation and communications.

FAA further states that the two-layer system will alleviate many of these problems by eliminating the present intermediate airways structure. The lower airways structure then will extend from generally 1,000 feet above the surface to 18,000 feet; and the jet route structure from 18,000 to 45,000 feet. Above these altitudes there will be no defined airways or routes.

The airways structure in Alaska and Hawaii will not be affected by the changes.

The existing three-layer system—established in April 1961—includes a low altitude airways system extending from generally 1,000 feet above the surface to 14,500 feet; an intermediate layer of airways from 14,500 to 24,000 feet; and a high-altitude jet sector extending upward from 24,000 feet.

DIXON HONORED — Continued from Page 1



The late Cromwell Dixon in his Curtis Company Aircraft.

picnic ground, 15 miles west of Helena and five miles south of Blossburg on the Divide and built in 1939 by the U. S. Forest Service in memory of Dixon, is included in the full schedule of events for Mrs. Rogers' stay in Montana.



Mrs. Rogers placing the wreath.

A CASE IN POINT

By Kenneth D. Beyer
Commission Attorney

The "Owner" and the Federal Aviation Registration Act

Dealer purchased a used Beech Travel-Air and recorded the title with the FAA. Thereafter, dealer mortgaged the aircraft and that mortgage was filed with the FAA. Thereafter Plaintiff purchased the airplane from the dealer trading in a Bonanza and paid a cash difference. Plaintiff made no effort to have a title check made. Plaintiff then left the original

of the Sales Slip and the completed registration form with dealer for forwarding to the FAA. The dealer then took out a second mortgage on the plane which was then in Plaintiff's possession. The bank had a title check made which showed dealer was the owner. That second mortgage was also recorded with the FAA. Following the date of purchase, but prior to the date of the second mortgage, the Plaintiff had a periodic inspection made on the airplane which was then in his possession, and this inspection was forwarded to the FAA and kept in the same file as the title papers. After the second mortgage was recorded, the dealer finally sent the FAA the registration for Plaintiff, ten months after the purchase date.

The court held that the Federal Aviation Registration Act provides that no conveyance, not recorded is valid except against the seller, or any person having **Actual Notice**. The court said that possession alone is not sufficient to give a third party actual notice, especially where property of this type is usually protected by recording of title papers.

The court held further that since the title papers are separated within the FAA file from the maintenance papers, the title examiner is under no duty to also examine the maintenance section unless requested to do so.

The court pointed out that the Plaintiff did not realize the importance attached to prompt registration and recording with the FAA and stated that the Plaintiff unfortunately acquired such knowledge at a high cost, but that since the duty of recording the

title rested upon the purchaser, his failure to do so was the actual cause of his loss. (Marsden vs. Southern Flight Service, Inc. et al. U.S.D.C., North Carolina, December 22, 1961).

Author's note: Take heed and avoid this expensive lesson—record your title immediately.

THREE AEROSPACE WORKSHOPS COMPLETED

Three Aerospace Workshops held at Montana State University, Montana State College and Western Montana College, were sponsored by the Montana Aeronautics Commission with the cooperation of the Department of Public Instruction; Montana State University; Montana State College; Western Montana College; the Federal Aviation Agency and the National Aviation and Space Administration. Mary Jo Janey, Supervisor of Aviation Education for the Montana Aeronautics Commission was the coordinator for the workshops.

The students, classroom teachers from throughout Montana and a number of other states, studied the various social, political and economic effects of the aerospace age on our modern civilization. A large portion of the workshops studies were methods of incorporating aviation and space topics into classroom teaching. This year's complete program was truly outstanding with presentations by many leading aviation authorities. Lecturing during workshops were: Dr. Mervin Strickler, FAA, Washington, D. C., Robert Henrich of the NASA; Col. William A. Breeze, Malmstrom Air Force Base; Cmdr. P. M. Stroux of the U. S. Navy; J. M. Ogle of the CAP (Rocky Mountain Region); Fred Costello of Midcontinent Airmotive Corp. of Denver, Colorado; Wilhelmina Hill, Elementary Education Specialist from the Office of Education Washington, D. C.; L. E. Morley of Mountain States Telephone Company and Charles A. Lynch, Frank Wiley and Jack Wilson from the Montana Aeronautics Commission.

Discussions were given on the use of the light plane in modern industry by Scott Stanley, Great Falls insurance man and Joe Reber of a Helena plumbing and heating firm. Agricultural Flying Classrooms were explained by Gail Stensland, Fort Benton High School Instructor.

One highlight was the visit of Astronaut, Major Frank Borman of the U. S. Air Force.



One of the workshop teams visiting on the FAA Hangars during Oklahoma City tour.

The participants all enjoyed the showing by the NASA Space mobile, complete with talks and demonstrations. Each teacher and student was given 2½ hours of actual flight lessons during the workshop by local instructors.

During the last week the group was flown to the Federal Aviation Agency Center in Oklahoma City, Oklahoma for a three day extensive tour of the installations including the Academy and the Medical Research Division. The trip to Oklahoma was made in a DC-6 provided by the FAA.

Montana State University Workshop— Missoula

—June 16-July 17—Dr. A. Clair Brewer was workshop Director. Dr. Brewer has a wide experience in the aerospace field and is presently science coordinator for the Springfield, Mo. public school system.

The flying portion was conducted through the facilities of the Missoula Skylite Inc. Robert J. Lueck, President.

Visitations were made to the Johnson Flying Service facilities, the Montana State University Planetarium, and the Forest Service smokejumpers installation. A committee of four toured the airports at Great Falls, Helena and Bozeman and reported back to the entire group.

The Missoula workshop project for this year was the compiling of a series of film strips to be used on future workshops and in workshop information material.

Western Montana College Workshop— Dillon

June 29-July 17—Dr. Wesley Caspers, Director, 51 students enrolled. Local flying activities were conducted at Tom Westall's, Dillon Flying Service. Field trips included; flights over Yellowstone Park and the Teton Mountains; the new administration building at Dillon; the Federal Aviation Agency Flight Service Station and TACAN facility. Mr. Earl Morton, Chief of the Flight Service Station lectured to the workshop students.

The Dillon Workshop project this year was a series of individual projects which will be incorporated into future workshop material and education series for schools.

Montana State College Workshop— Bozeman

June 16-July 17—Richard D. Bollard, Director. Mr. Bollard is instructor in industrial arts and technology at Montana State College. Lectures were held from 8:50 A.M. until noon and 1:00 P.M. until 4:00 P.M. Mondays through Fridays.

Flying portion was conducted at Al Newby's Flight Line Inc., and Stradley's Gallatin Flying Service both located on Gallatin Field.

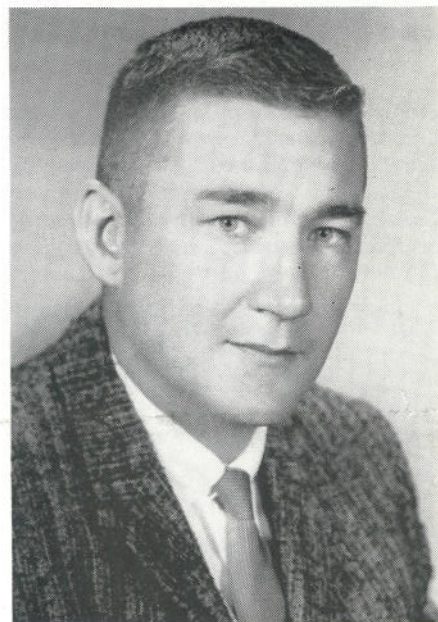
The 1964 Aerospace Workshop was the first to be held at Montana State, and their project was the compiling of all workshop lectures which will be incorporated into a handbook of resource material for teachers desiring to correlate spaceage material into their regular curriculums.

FOR SALE: J 3 Piper Cub—200 hours since major—Fabric green—Will have fresh license—new tires—65 HP—Contact: Frank Miller—807 Terry Avenue, Billings, Mont.

ENGINEER GRANGER "OFF TO ALASKA"

Eddie Granger, Montana Aeronautics Airport Engineer since 1962, has accepted a position with the Alaska Division of Aviation at Anchorage, Alaska. Ed will be the Inter-Continental Airport Engineer for Aviation Division Department of Public Works assigned to Anchorage and Fairbanks airports.

Ed has carried out his duties with the Commission ably and enthusiastically. Ed has continually studied to further his abilities, acquiring his Registered Professional Engineer's License in 1963. As a pilot, Ed piloted



Eddie Granger

the state aircraft extensively in the execution of his duties as Engineer, and acquired several additional ratings to his Commercial Pilots' license in the past couple of years.

Ed, his wife Josie and their three children, Bill 11; Tim 6; and wee Kellie Rae one month, departed for Alaska on July 27. We join the Granger's many friends in wishing them the Very Best of Everything in their new home.

MAC Advises

That the Air Traffic Services Division of the Federal Aviation Agency, Washington, D. C., has established "WYS" as the identifier code for the MAC sponsored new Yellowstone Airport being developed at West Yellowstone, Montana.

HODGE BECOMES CHIEF OF HELENA'S COMBINED FSS/TOWER OPERATION BARTLETT RETIRES— BLANTON TRANSFERS

Mr. Ludwig G. "Lud" Hodge became Chief of the new combined Flight Service Station and Control Tower installation in Helena upon the retirement of W. B. Bartlett, FFS Chief and the transfer of Lowell Blanton, Tower Chief.



Ludwig "Lud" Hodge

Lud Hodge was born in Minnesota and attended schools in Minnesota and Iowa. He received training at the Midland Radio and Television Schools Inc. in Kansas City and specialized training at the Federal Aviation Agency's Aeronautical Training Center in Oklahoma.

Lud served with the U. S. Maritime Service from 1943 through 1946. He was employed by Northwest Airlines from 1947 to 1951. Since March of 1951 Lud has been with the FAA and was stationed in Honolulu and Guam Communication stations; Air Route Traffic Control Center in Honolulu, the Center and Approach Control Wake Island; Kahului, Maui Tower, Casper Wyoming Tower and Billings, Montana Tower and Approach Control. His latest assignment was in Billings before his recent transfer.

Lud's wide experience in both Communications and Control Tower Operations has given him the necessary qualifications for the position of Chief of the Helena Combined installation.

Lud is not a stranger to Helena as he and his wife Merelyn resided here in their first year of married life when Lud was employed by Northwest. He tells us that he is more than pleased to return to Helena and the mountains and looks forward to re-

siding here with his wife and their three children, Denise 14, Curtis 12 and Nalani, 10.

Wilson B. "Bart" Bartlett—Retires

After 35 years of active service with the Federal Government Bart retired as Chief of the Helena FAA Flight Service Station.

Bart spent 10 years of the 35 in the U. S. Navy as a pilot and was stationed on the "Langley" the first aircraft carrier, he later transferred to the "Saratoga" when it was commissioned. Serving with the Patrol Squadron in Honolulu for 4 years, Bart was part of the first mast flight from the mainland to Honolulu in the P2YA in 1935.

One of Bart's many flying experiences that he recalls is his participation for 3 weeks in the air search for Amelia Earhart.

During his 25 years with the FAA, Bart was stationed at Dubois, Idaho, Bellingham, Spokane and Everett, Washington, Miles City and Helena, Montana. He was located in Helena since 1949 and was an active member of the MPA and former President of the Helena Hangar.



Wilson "Bart" Bartlett

Bart tells us he is going to devote his time as part-time bowling instructor and Helena's City bowling league coordinator in addition to a great deal of fishing and hunting. Bart and his wife Eve reside at 1315 Knight in Helena.

Lowell Blanton—Transfers

Former Chief of the Helena Control Tower, Lowell D. Blanton has transferred to Lincoln, Nebraska.

Born and attending schools in Arkansas, Lowell received his specialized training at the FAA's Air Traffic Control Instructor School, Supervisory Management School and Commercial Pilots School.

Included among the certificates

that Lowell holds are:

—FAA Flight Service specialist, Air Traffic Control specialist (terminal-radar) U. S. Weather Bureau, FCC Radio Telephone Operator.

Lowell spent 4 years in the U. S. Navy radio communications, 3 years in the U. S. Army Air Force Control Tower Operations in the U. S. and overseas service, and holds a number of medals including Asiatic Pacific Campaign Medal with 3 Bronze stars and the Meritorious Unit Award Medal.

Lowell has spent 23 years with the FAA in Air Traffic Facilities, Control Towers, Combined Station/Towers and Terminal Radar Approach Control.

While living in Helena, Lowell was an active member of the Montana Pilots Association and the Helena Hangar.

The Blanton's are now residing at 3315 North 66, Lincoln, Nebraska 68507.

"FAA Withdraws Proposed Rule On Lowering Area Positive Control to 18,000 Feet"

A Notice of Proposed Rule Making which would have lowered the floor of Area Positive Control from 24,000 feet to 18,000 feet over a large portion of the country has been withdrawn by the Federal Aviation Agency.

Comments received in response to the Notice indicated that certain military and general aviation activities would be adversely affected if the proposal were adopted and soaring (glider) operations would be curtailed.

"In view of the comments received," "David D. Thomas, FAA's Associate Administrator for Programs, said, "the Federal Aviation Agency concludes that further study of operations and operational requirements in the 18,000 feet to 24,000 feet strata is required."

The Notice of Proposed Rule Making would have extended Positive Control down to 18,000 feet over an area running East to West from New York to California and covering all or parts of 31 states. The Notice was issued last March 28.

Area Positive Control currently is in effect from 24,000 feet to 60,000 feet over virtually the entire continental United States. Only properly-equipped aircraft operating under Instrument Flight Rules are permitted to fly in this airspace.

WAYNE PARRISH TO BE INAC FEATURED SPEAKER

Wayne W. Parrish, well-known aviation publisher will be the featured banquet speaker at the International NW Aviation Council Convention to be held in Helena, September 24, 25 and 26.

Wayne Parrish holds a number of educational degrees and a long list of awards, honors and memberships in national and international organizations. In addition to having been a reporter on several of the Nation's larger newspapers, Parrish was a staff writer for the Literary Digest and later, Editor for the National Aeronautics Magazine. In 1937 he founded the American Aviation Publications Inc., which roster includes, American Aviation; Missiles and Rockets; Air Cargo and Armed Forces Management, World Aviation Directory, World Space Directory; Aviation Daily and Space Daily, Parrish was founder and is presently President of the Airline Guides.



Wayne W. Parrish

Wayne states that he has logged 1,507,863 air miles and has taken off from or landed at every airport on the U. S. Mainland served by scheduled airlines on regularly scheduled flights.

Every phase of the Aviation industry in Helena and the surrounding area has worked diligently and cooperated in the planning of the 1964 Convention. This year's program promises to be three days of interesting speakers, panels and exhibits, as well as fun and entertainment for delegates and their wives. **Remember:** Holiday Motel and Holiday Inn are the headquarters.

Registration begins on Thursday, September 24 from 1:00 P.M. to 9 P.M.

HOW TO GET A WEATHER BRIEFING

R. A. Dightman
U. S. Weather Bureau
SALO, Helena, Montana

Some months ago in this newsletter, Harry Elser, Weather Bureau Quality Control Officer stationed at Great Falls, had a series of two articles on "How to Get the Most Out of a Weather Briefing." A few instances lately seem to indicate that it would be appropriate to discuss "How to Get a Weather Briefing" in the first place. Instant response, by telephone or in person, to pilot needs is a desirable goal of the weather briefer; however, with fully occupied telephone circuits and with many stations having but one man on duty at a time, who has to make observations, answer all telephone calls, take care of the needs of pilots and others who visit the office, etc., it simply is unfortunate that a "briefer" (FAA or Weather Bureau) cannot always be instantly available. Sometimes, too, several pilots having different destinations, aircraft, and capabilities, and each requiring special attention, can be at the briefing console at the same time. It amounts to a problem at best, but there are some ways to improve the situation.

Before flight, in Montana, one can listen to the latest L/MF continuous transcribed weather broadcast from Billings (400 KC), Bozeman (329 KC), Great Falls (371 KC), Miles City (320 KC) or Missoula (308 KC). Many pilots have found it convenient to keep a portable receiver handy for this purpose. A pilot may call or visit a Weather Bureau Airport Station, or an FAA Flight Service Station for briefing. If the latest aviation weather reports and advisories are enough, the FAA FSS broadcast, at 15 or 45 minutes after each hour, is a good source—if and when a VHF receiver is available.

Telephone numbers for Weather Bureau Airport Stations, FAA Flight Service Stations, and interphone service drops are listed in the FAA Flight Information manual. In many cases these numbers are not listed in public directories in order to reserve them for aviation use only, and they should be safeguarded to prevent their falling into other hands. The trouble is that, if these unlisted numbers become too well known and are used for other than the purpose assigned to them, these lines also become overloaded,

until a new number is obtained. This telephone "bit" is a real problem at almost every Weather Bureau Airport Station—a problem that multiplies rapidly in bad weather and becomes almost impossible when only one forecaster-briefer is on duty (a common condition at most WB stations). The end, and undesirable, result is that the one man can handle only one telephone line at a time, while simultaneously taking observations, keeping abreast of weather developments, and keeping himself apprised of the developing weather so he can brief pilots intelligently—including those visiting the office as well as those who telephone. Then there are news media, contractors, farmers, ranchers, etc., who also have service needs when weather starts closing in and the WB has service responsibilities in these directions too. The service is available; the problem is reaching it.

One or two small suggestions may help. First, if possible, don't wait until the last possible minute before checking flight weather. There may be several pilots who "got there first." Then, when you reach him, if you tell him **first** that you are interested in flight weather, the forecaster-briefer will know where to start, or, if someone other than a qualified briefer answers the telephone, you can be referred to the briefer with the least possible delay. The WB and FAA are anxious to help in flight assistance activities; both make substantial efforts to understand pilot's problems, and we are certain that this understanding works the other way as well. If this little summary helps foster even a small degree of better appreciation of mutual difficulties, it will be worthwhile.



FEDERAL AVIATION AGENCY ITINERARY LISTING

Airport	Aug.	Sept.
Bozeman	13	17
(Gallatin Field)		
Culbertson	5	
Glasgow		9
Glendive		23
Great Falls	6	10
(International)		
Havre	4	
Lewistown	26	
Missoula	20	24
Sidney		24

NOTE: Provisions have been made to give private pilot written examinations on an appointment basis only at the following FAA Flight Service Stations:

Bozeman	Lewistown
Butte	Livingston
Cut Bank	Miles City
Dillon	Missoula

Mary Jo Janey Elected to NAEC Board

Mrs. Mary Jo Janey, Supervisor of Aviation Education, was elected to the Board of Directors of the National Aerospace Education Council at its regular meeting in Washington, D. C., June 28, 1964.

The 20 member Board was organized in 1950 as a non-profit, independent organization to provide schools and libraries with supplementary and enrichment material on aviation and the world of space. In addition to the publishing of teaching aids, the NAE Council publishes children's books for all age levels.

The organization of the Council coincided with an increasing awareness of the vital influence aviation has had on the social, political and economic welfare of our world. Recognizing that teachers must be guided to a greater understanding of aviation before they can adequately prepare children for an aerospace dominated future, the NAEC has as its aim to aid the teacher "to instruct in the endless new dimension that man is conquering."

Council President is Dr. Leslie Bryan, University of Illinois. Some members of the board are Dr. Mervin Strickler, FAA; James B. Bernardo, NASA; Dr. J. Wesley Crum, Central Washington St. College, Ellensburg, Washington; Dr. Leslie L. Thomason, Cessna Aircraft Company, Wichita, Kansas; Marilyn C. Link, Mohawk Airlines, New York; and James Vercellino, Director, Arizona Department of Aeronautics.



Dr. Mervin Strickler and Mary Jo Janey shown inspecting a number of publications relating to MAC's Education Programs during Mrs. Janey's recent visit to Washington, D. C.



CALENDAR

August 8, Caldwell, Idaho—Fly-In Rodeo and Mayor's Day. (see article).

August 12, Helena—Commission Meeting.

August 16-20, Miami, Florida—International Flying Farmers Annual Convention.

August 16, Dillon—Airport Administration Building Dedication! (see article).

August 30, Big Timber—Flying Farmers Fly-In Picnic at Langhus Ranch.

September 5-6, Spokane, Washington—Northwest Aviation Seminar, Hollywood and TV personality Bob Cummings, will be the guest speaker at the dinner on September 5. An all around topnotch program is expected.

September 24-25-26, Helena—INAC Annual Convention. (see article).

October 3-4, Lewistown—Montana Flying Farmer's Convention.

October 3-10, Texas—The 16th Annual ALL TEXAS AIR TOUR, Interested persons write: All Texas Air Tour, 204 West 16th. Street, Austin, Texas, U. S. A. for information and reservations.

October 12-13-14, Rapid City, South Dakota—NASAO National Convention.

October 19-20-21, Norman, Oklahoma—National Airports Conference to be held at the University of Oklahoma. This conference is jointly sponsored by the University and the American Association of Airport Executives.

BOZEMAN FLY-IN A HUGE SUCCESS

MAC joins the estimated crowd of 1200 persons in complimenting the Bozeman Optimist Club and all participants of the Bozeman Fly-In and Air Show held on July 26.

The Air Show began with a series of perfectly performing smoke jumpers carrying smoke bombs. Six parachutists were dropped at a time, making different figure designs in the air as they descended, with the last jumpers passing a baton between them during their descent.

The second event of the day was the Antique Aircraft Fly-By. The crowd was attracted by a number of fine antique aircraft including the

1931 Gypsy Moth belonging to Swede Lindgren, Montana Highway Department Chief Pilot; Aeronautics Commission member, Clarence Anthony's Fairchild; Morrison Flying Service Employee, John Morrison's 1941 Taylor craft, a Gull Wing Stinson from Idaho and the 1932 Great Lakes Trainer owned by Nelson Story III. To climax this portion, Al Newby performed in the Great Lakes Trainer. Al put on a thrilling acrobatic show and even "out-did" his usual fine performance.

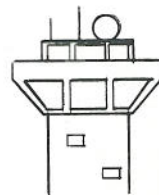


Al Newby—Owner of Flight Line Inc., Belgrade and aerial acrobatic pilot shown in the Great Lakes Trainer, owned by Nelson Story III of Bozeman.

To conclude the program, Mr. Jack Ashford of Longmont, Colorado gave a spectacular demonstration in his D Model F-51 fighter. Ashford, executed a series of rolls, loops, Cuban 8's; inverted flight (the entire length of the field), and made several passes over the field at approximately 400 MPH.

The turn-out was one of the finest Montana Aviation has seen at an event with the tie down areas completely filled and rows of automobiles.

Again, congratulations Bozeman!



TOWER

OPERATIONS

MONTANA TOWER-CONTROLLED AIRPORT OPERATIONS

	Total Operations	Instrument Operations
Billings	7,726	774
Great Falls	11,404	621
Missoula	6,312	208
Helena	4,440	85

FOR SALE: Piper PA 12 Super Cruiser—115 HP Lycom—Fresh Annual—1300 TT—340 SMOH—New VHF Radio—New Tires—perfect fabric—exceptionally clean thruout—always hangared, Price \$2650.00—Contact Tony Francisco, Townsend, Phone 266-3325.

FOR SALE: Meyers 200, 4 place excellent condition—redbook price. Will trade. Contact H. R. Bowman 1101 10th Avenue S., Great Falls, Montana, Phone 452-4965.

FOR SALE: 1948 Ercoupe—Model 415 CD—1000 TT—2505 MOH 85 Continental w/metal prop—rudder pedal and handbrake conversion—Bendix radio. New windshield—excellent fabric and upholstery, rubber and paint. All FAA directives complied with. Will sacrifice at \$2,000. Contact Carl E. Jacobsen, Hotel Bozeman, Bozeman, Montana, Phone 586-2381 or Phone 734-2452, Carter, Montana.

AIRPORT NOTES



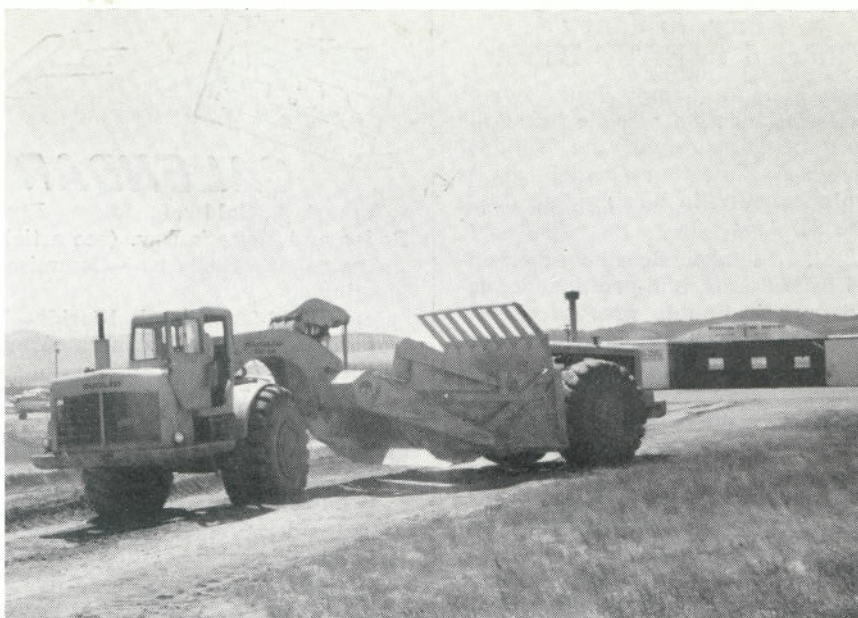
By James H. Monger
Assistant Director, Airports

MORGAN—A border crossing airstrip was recently completed on the Canadian border north of Malta. The Customs Station at this location is called Morgan and the Canadian Station is called Monchy. The airstrip lies directly on the border in an east and west direction. The runway surface is now graded and soon there will be markers and a windsock. This airstrip was constructed by Phillips County and interested organizations in the Malta area. A more thorough story with photos will be in the September Newsletter issue.



Harlowton strip under construction

HARLOWTON—With the new runway extension the runway length is now 3,319 feet.



Helena Airport—A large Euclid prepares to "surface strip" new area.

EKALAKA—The new General Aviation Airport for Ekalaka and Carter County is now under construction. This project will be completed within the next 30 days and is in the same location as the old landing area.

RICHEY—A new General Aviation Utility Airport is now under construction adjacent to the southwest edge of the town of Richey. This airport will be completed this summer and will consist of one stabilized turf runway with a parking area, windcone and runway markers.

LAVINA-RYEGATE—Two new General Aviation Airports will be completed this summer under the sponsorship of Golden Valley County. The Ryegate Airport will be one mile south of town and the Lavina Airport one mile northwest of town. Bids will be opened for these construction projects on August 14 at the State Capitol Building. All interested bidders should have a class C contractor's license which can be obtained from the Board of Equalization at the Capitol Building.

HELENA—Construction began on a new public parking and tie-down area addition to the west end of the Helena Airport's ramp.

BROADUS—Engineering is now underway for a new General Aviation Utility Airport one-half mile south of the town of Broadus. This airport is being sponsored by Powder River County. It is planned that advertisement for bids will be underway in

August, with a September bid opening and construction being completed prior to November 1, this year.

JORDAN—Preliminary engineering is now underway on the Garfield County Airport at Jordan for a future local, state and federal aid project. This project will consist of paving and lighting the main runway and paving a parking area. Complete engineering should be finished this fall for a 1965 construction project.

WHITEFISH—The airport at Whitefish was found to be in good condition.

BACK COUNTRY AIRSTRIPS—A recent inspection trip was conducted on airports at Polebridge, Schafer Meadows, Meadow Creek and Spotted Bear. All airports were found to be in very good condition and receiving a great amount of traffic this summer. You will notice from the photograph of Schafer that the wildlife is plentiful right on the airport property itself.

(Pilot's note: It is **not** recommended going out of Schafer Meadows or Meadow Creek during the warm part of the forenoon and afternoon because of the down-air and the turbulent conditions that could exist on an approach into these two fields.)

Meadow Creek has a few gopher holes on the left side, when you are landing to the south. Horses were found on the strip at Spotted Bear.

Camp ground conditions at Meadow Creek were found to be excellent.

The Forest Service has provided two comfort stations and several picnic benches and barbecue pits.)



Proof that in Montana, hunters should fly—or fliers should hunt.



Close up of Schafer Meadow's airstrip visitor—Mr. Moose.

"Hot, High and Humid"

Warm weather brings out airplanes the way a cookout attracts bugs. It's a time of flying vacation, fishing trips by air, plain pleasure flights and cross-country visits. It is also a time of accidents caused by the "Three H's"—hot, high and humid conditions.

Summer flying trips often take people to mountainous areas where the unwary pilot can get himself in an embarrassing position because of high altitude and heat. To avoid looking awkward, a pilot must make proper allowance for density altitude—pressure altitude corrected for temperature and humidity.

The altitude-temperature effects on aircraft performance are well known but, unfortunately, are frequently ignored. Failure to consider density alti-

tude was a factor in three aircraft accidents taking the lives of 14 persons during one month in one western state last summer.

A pilot attempting to take off from an airport with an altitude a few hundred to several thousand feet higher than he is used to, finds that the runway seems much shorter. He's still on the ground because the wings haven't developed lift in the thin air.

After he gets off, he will find his rate-of-climb substantially less. If the day is hot, the problem is compounded. High humidity further aggravates the problem. High altitude, high temperature and high humidity all mean less air density. Less density means less lift—and more runway needed to get you off the ground.

As an example of altitude-temperature effects on aircraft performance take an airport in a mountainous area. With a pressure altitude of 6,000 feet and an airport temperature of 100 degrees fahrenheit, the take-off distance for an aircraft increases 230 percent of its sea level standard day take-off distance. The rate-of-climb decreases 76 percent. An aircraft using 1,000 feet for standard day sea level take-off requires 3,300 feet. If its standard day rate-of-climb is 500 feet per minute, the rate drops to 165 feet per minute.

It isn't only lift that is adversely affected by hot weather and high altitude. Horsepower also is substantially reduced. Horsepower, unless the en-

gine is supercharged—and most light aircraft are not—is based on sea level ratings. On the average light airplane, total horsepower output is required to maintain flight in the vicinity of 13,000 feet. If the temperature is high enough, these conditions can prevail at 8,000 to 9,000 feet or lower because of decreased density. In this situation the plane's angle of attack must be higher, which increases the drag, thus decreasing the lift and requiring more horsepower to maintain level flight. If no additional power is available, controls become less responsive and the aircraft is more prone to stall.

The aircraft stalls at the same indicated airspeed regardless of altitude, but the rate of change between flying and stalling speed is much more rapid at higher altitudes. Although it may be necessary to maintain a nose-high attitude, any pilot flying at higher altitudes must be especially alert in avoiding too nose-high an attitude.

The best insurance against getting trapped by hot weather, high altitude operations is careful planning and reviewing the aircraft's performance charts in the owner's handbook or flight manual. In addition, many aeronautical charts for sections covering mountainous areas have a Koch Chart on the reverse side. The Koch Chart for altitude-temperature effects on airplane performance gives the pilot an excellent guide to performance based upon airport pressure altitude which he can obtain from the control tower. If a tower is not available, set the barometric window at 29.92 inches and read the pressure altitude directly from the instrument.

Here are a few guides for the pilot operating in mountainous areas, particularly in hot weather:

- *Check aircraft weight and center of gravity. Don't toss in a poorly distributed overload of gear and passengers.

- *Watch the aircraft's performance. Don't wait until you get into a tight spot to check power reserves.

- *Altimeter settings can be inaccurate due to terrain. Because of ridges and narrow canyons, the air velocity may be accelerated, reducing pressure and giving a false reading.

- *Approach a mountain ridge at about a 45 degree angle, rather than a 90 degree angle, so you won't have to make a tight 180 turn if you can't make it over the ridge.

- *Approach the ridge at a sufficient

altitude to see what's out on the other side.

If you are VFR, avoid clouds. Some of them can be "granite cumulus" with rocks in them.

*Mountainous terrain seldom looks the same way twice. Although you feel you may know it like the back of your hand, don't follow the flat country practice of getting down low and following a road—you may find yourself boxed in a box canyon.

*If you file IFR, remember the minimum enroute altitude must provide 2,000 feet of terrain clearance in a designated mountainous area. That may put you up so high it will be difficult to hold altitude without supercharged engines.

*The last and perhaps most pertinent advice is plan. Plan take-off distance, rate-of-climb, best routes, altitudes, weather and winds.

And plan a way out of any conceivable situation, for to the "Three H's" might well be added a fourth—Human Factors, the greatest cause of accidents.

Flying Farmers Elect Delegates To Convention At July 4th Fly-In



Flying Farmer's July 4th "Fun in the Sun."

Henry Wood, Milton Butcher, Sam Langhus and Clay Greening were appointed the Montana Flying Farmer's delegates to attend the International Convention in Miami, Florida, August 16 through 20th. The appointments were made at the July 4th Fly-In held at Ed and Martha Baldwins at Finley Point.

Queen Verna Wood informed us that 30 adults and a number of children thoroughly enjoyed the day of boating, swimming, fine weather and lots of delicious goodies.

CONGRATULATIONS!



CERTIFICATES ISSUED RECENTLY TO MONTANA FLYERS

Jacobsen, Kermit V.—Glendive—Private
 Stroh, James P.—Laurel—Student
 Skovgaard, Ove R.—Lewistown—Grnd. Instr.—Basic
 Scott, Arvid W.—Culbertson—Student
 Grovom, Harold N.—Sidney, Private
 Weldon, Kent O.—Billings—Student
 Hammersmark, Harold—Big Timber—Student
 Wilhelm, Keith R.—Pryor—Commercial
 Young, Ralph S.—Billings—MEL on Commercial
 Ayers, Roy D.—Grass Range—Student
 Steiner, Del L.—Billings—Student
 Weber, Bernard C.—Sheridan, Wyoming—Private
 Eder, Bert P.—Poplar—Private
 Miller, Fredericks S.—Billings—Student
 Walker, Dean B.—Lovell, Wyoming—Flt. Instr.
 Jacobsen, Clifford A.—Glendive—Student
 McKee, Donald D.—Kevin—Private
 Rothrock, James H.—Billings—SEL on ATR
 Shore, David A.—Helena—Student
 Cook, Richard S.—Great Falls—Student
 Bohannon, Mark E.—Columbus—Student
 Little, Bridger P.—Glasgow—Private
 Ramsey, Neil W.—Billings—Private
 Cosner, Clarence A.—Billings—Student
 Crittenden, Gilbert R.—Billings—MEL on Private
 Schellinger, Clifford D.—Glasgow—MEL on Private
 Rush, Weldon M.—Scobey—Commercial
 Etchart, Margaret E.—Glasgow—Student
 McKown, Michael K.—Deer Lodge—Student
 Pritzl, John M.—Missoula—Student
 Hills, Milas J.—White Sulphur Springs—Student
 Connerly, Alvin F.—Butte—Student
 Sage, Chauneay R.—Drummond—Student

Anderson, Blaine C.—Helena—Student
 Biggerstaff, Daniel R.—Denton—Commercial Pilot
 Hopkins, Janine C.—Helena—Student
 Young, William H.—Dillon—Student
 Monger, Joseph W.—Missoula—Private
 Lorz, Larry L.—North Dakota—Airframe Mechanic
 Wilhelm, Keith R.—Pryor—Airframe Mechanic
 Campanella, John C.—Great Falls—Student
 Armstrong, George H.—Great Falls—Private
 Swainson, John W.—Livingston—Private
 Coyle, Jerome P.—Missoula—Student
 Sturdevant, Harold L.—Missoula—Student
 Wood, Lisle E.—Butte—Commercial
 Billman, Roger L.—Missoula—Commercial
 Bauer, Hermann J.—Great Falls—Private
 Kidd, Jerry L.—Great Falls—Student
 DuPuis, Robert R.—Polson—Student
 Cady, Terry J.—Great Falls—Student
 Schneider, Frederick Jr.—Townsend—Student
 Morrison, John F.—Helena—Student
 Jordan, Donley B.—Missoula—Student
 Thompson, Curt A.—Sunburst—Private
 McGuire, Stonewall—Drummond—Private
 Packard, Howard A.—Great Falls—Student
 Patrick, Robert D.—Valdez, Alaska—Private
 Waniata, Roger P.—Great Falls—Student
 Hubbard, Charles E.—Shelby—Student
 Moon, Michael E.—Missoula—Student
 Wolter, Roger F.—Great Falls—Student
 Palmquist, John A.—Bozeman—Student
 Emmett, Daniel F.—Butte—Student
 Eastman, William A.—Missoula—Student
 Smith, Edgar D.—E. Helena—Com. ASMEL, Instrument
 Amestoy, Fred L.—Missoula—Private
 Davis, Howard W.—Lincoln—Student
 Etchart, Donna L.—Glasgow—Student

"AVIATION MEDICAL EXAMINERS" IN MONTANA

Big Timber

Standish, Dr. Vernon D., Box 887, 127 McLeod St.

Billings

Caraway, Dr. Herbert T., 1231 N. 29th St.
DeGroat, Dr. Charles H., 810 Highwood Circle
Goulding, Dr. Allan L., 2802 Ninth Avenue N.
Mohs, Dr. Frank R., 2802 Ninth Avenue N.
Morrison, Dr. James D., 1241 North Broadway
Nelson, Dr. Richard C., 412 North Broadway
Smalley, Dr. Raymond E., 1231 North 29th Street

Bozeman

Sabo, Dr. Francis I., 104 East Main
Vadheim, Dr. Albert L., 111 S. Tracy Avenue
Visscher, Dr. Paul H., 28 North Black Street

Butte

Plett, Dr. John V., 9 East Park Street
Thometz, Dr. Robert W., 9 East Park Street

Chester

Buker, Dr. Richard S., Jr., Liberty County Hospital

Chinook

Leeds, Dr. Robert H., Box 767
McCannel, Dr. Wilfrid A., 128 Indiana

Columbus

Swanson, Dr. Clarence H., Jr., Stillwater Clinic

Conrad

Cannon, Dr. Porter S., 416 S. Main Street
Hamilton, Dr. Robert S., Box 997

Cut Bank

Markette, Dr. James R., 140 S. Central
Sletten, Dr. Robert B., Box 338 Bank Block
Waller, Dr. George D., Box 998 Bank Block

Dillon

McLaren, Dr. Richard H., 306 S. Idaho Street

Ekalaka

Musser, Dr. Richard D.,

Glasgow

Haubrick, Dr. Paul W., Highway 2 East, Box 672
Scharnweber, Dr. Henry C., 1009 Sixth Avenue N., Box 408
Smith, Dr. Phillip A., Box 672

Glendive

Chambers, Dr. Richard O., 1312 N. Meade Avenue

Great Falls

Allred, Dr. Ivan A., 503 First Avenue North
Bulger, Dr. James J., College Park Medical Center
Crago, Dr. Felix H., 1220 Central Avenue
Davidson, Dr. Robert C., 1220 Central Avenue
Gerlach, Dr. William B., 504½ Central Avenue West
Holzberger, Dr. Robert J., 501 First Avenue North
Keenan, Dr. Thomas M., 501 First Avenue North
McGregor, Dr. John F., 301 Ford Building
Person, Dr. Waldermar N., 1220 Central Avenue

Hamilton

Tefft, Dr. C. C., 307 State Street

Havre

Axley, Dr. Albert W., Havre Clinic
Franken, Dr. N. A., Medical Arts Building
MacKenzie, Dr. Duncan S., Jr., 301 Fourth Avenue

Helena

Bovington, Dr. J. R., 555 Fuller Avenue
Burgess, Dr. John R., 820 N. Montana Avenue
Hoopes, Dr. William J., 1930 Ninth Avenue
Little, Dr. Amos R., Jr., 820 North Montana Avenue

Jordan

Farrand, Dr. Brownlow C., Main Street

Kalispell

Ferree, Dr. Virgil D., 221 First Avenue East
Hensler, Dr. Eugene C., Sunset Blvd. and Nevada Street
Wright, Dr. G. Byron, 704 Main St.

Laurel

Calvert, Dr. Matthew W., 14 First Avenue, Box 427

Lewistown

Fraser, Dr. Joseph P., 119 E. Main Street
Lefever, Dr. Hollis K., 119 E. Main Street
Gans, Dr. Paul J., 119 E. Main St.

Livingston

Walker, Dr. Robert E., 601 Robin Lane
Harris, Dr. William E., 601 Robin Lane

Miles City

Campodonico, Dr. Lawrence A., 6 North Seventh Street
Harlow, Dr. H. D., 6 North Seventh Street
Stickney, Dr. Edwin L., 2000 Clark

Winter, Dr. Malcom D., Sr., 6 North Seventh Street
Winter, Dr. Malcolm D., Jr., 6 North Seventh Street

Missoula

Brooke, Dr. Charles P., Fifth Street and Orange
Green, Dr. Norman S., Fifth Street and Orange
Turner, Dr. Allan P., 235 East Pine Street

Plentywood

Messinger, Dr. Harold R., 501 W. Highland Avenue
Stoner, Dr. Gaylen J., 120 East Second Avenue North

Polson

Benkleman, Dr. Ward E., 201 Main Street, Box 1450

Roundup

Davis, Dr. David R., 20 11th Avenue West

Scobey

Fitz, Dr. Merle D.
Norman, Dr. Clyde H.

Shelby

Stanchfield, Dr. Robert F., 925 Oilfield Avenue

Sidney

Danner, Dr. William B., 602 S. Lincoln Street
Swenson, Dr. Oscar A., 222 Second Avenue South West

Whitefish

McIntyre, Dr. Bruce C., Whitefish Clinic 7th and Park
Miller, Dr. Wilfred S., Whitefish Clinic 7th and Park

Wolf Point

Knapp, Dr. R. D., 226½ Main Street

Caldwell, Idaho "Fly-In" Rodeo Day

Saturday, August 8, has been officially proclaimed by Mayor N. E. "Coley" Smith as "Caldwell Fly-In Rodeo Day" and "Mayor's Day." Pilots are urged to bring their hometown Mayor with them for the Rodeo.

Plan a gala fly-in week-end. A special package price of \$3 for adults and \$2 for children, has been established for fly-in participants which include the airport buffet, transportation to the rodeo grounds, the parade, Chuck Wagon Bar B-Q and the Caldwell Night Rodeo.

Write Doren Bevel, Caldwell Chamber of Commerce, if you wish assistance in overnight accommodations.

PILOTS REMEMBER: Helena frequency is 117.7 instead of 117.9.

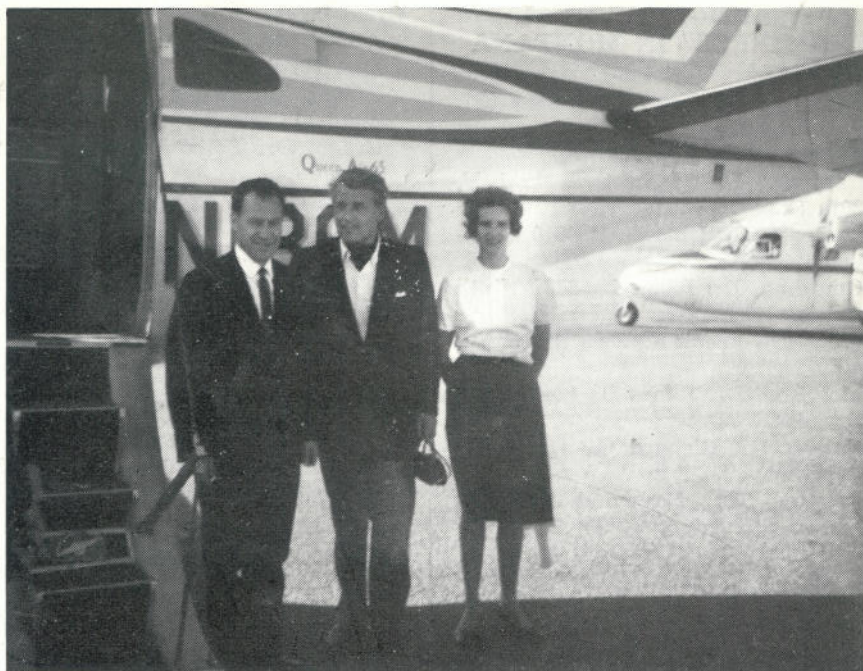
To contact Helena Flight Service, call the listed Control Tower number **442-9902** instead of 442-8110.

Research Clinic Hears Dr. Wernher Von Braun

A high spot of the Navy Research and Development Clinic held at Montana State College on July 22, 23 and 24 was the guest appearance of Dr. Wernher Von Braun, Director of the George C. Marshall Space Flight Center. Dr. Braun spoke at the banquet on the 23rd with his topic "Man to the Moon—Why and How."

Dr. Von Braun, who began his flying career in 1935 in gliders and was flying in propelled aircraft by 1939, was one of the many top scientists, technicians and engineers from the U. S. Navy, research and development industry, other defense agencies and governmental departments that appeared during the recent clinic.

The Navy sponsors a similar Clinic once each year in different regions of the United States with the aim of establishing research and development industry in the area. The Bozeman Clinic was co-sponsored with the Navy by the State of Montana and the University System.



(Governor Tim Babcock, Dr. Von Braun and Mrs. Von Braun.) The Governor met the Von Brauns in West Yellowstone when they arrived in the Commissions' Queen Air to tour Yellowstone Park.

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

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